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EXAMINER

LIU, HAN L

ART UNIT

PAPER NUMBER

3746

9

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/034,054

Applicant(s)

DOOLEY, KEVIN ALLAN

Examiner

Han Lieh Liu

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-17 is/are allowed.
- 6) ☒ Claim(s) 1 and 5 is/are rejected.
- 7) ☒ Claim(s) 2-4 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

1. Receipt is acknowledged of papers submitted for "Amendment" on 07/25/2003. This amendment amends claim 1 and Specification. Amendment papers have been placed of record in the file. The amended claims are examined in this office action.

Drawings

2. The drawings filed on 04/30/2002 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 5 rejected under 35 U.S.C. 102(b) as being anticipated by Engdahl et al. (USPN 4927334).

With regard to claims 1 and 5, Engdahl et al. disclose a pump (1) in Figs. 2-5 that is a two-chamber double-acting piston, column 3 lines 39 – 51, (Figs. 7-8 show an alternative construction of a magnetostrictive rod driven pump) comprising a piston (12) formed of a

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magnetostrictive material (Terfenol-D, column 3 line 43), susceptible to changes in physical dimensions in the presence of a magnetic field (coil 15); first and second chamber (not labeled, shown in Fig. 7 as 32) coupled to said magnetostrictive element to vary volume as said magnetostrictive element (11) changes shape, column 1 lines 49 – 66.

Allowable Subject Matter

4. Claims 2 – 4 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 7 – 17 are allowed.

Response to Arguments

6. Applicant's arguments with respect to claim 1 have been considered but are not persuasive in view of the new ground(s) of rejection. This amendment is non-final to afford the applicant the opportunity to respond to the new ground of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Brenan et al. (USPN 6059546).

Brenan et al. disclose a pump for impelling a fluid includes a first variable volume and a second variable volume defined by a first membrane and a second membrane. The pump also


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includes a first contractile actuator, for displacing the first membrane from a first position to a second position in such a manner as to vary the first variable volume and a second contractile actuator, for restoring the first membrane from the second position to the first position in such a manner as to vary the first variable volume.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Han Lieh Liu whose telephone number is 703-305-0860. The examiner can normally be reached on Monday - Thursday 7:30 to 16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 703-308-0102. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0861.


Han Lieh Liu
August 29, 2003

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